THE ASTROPHYSICAL JOURNAL SUPPLEMENT SERIES

CONTENTS OF VOLUME 173

2007 NOVEMBER NUMBER 1

	Page
THE INTRINSICALLY X-RAY-WEAK QUASAR PHL 1811. II. OPTICAL AND UV SPECTRA AND ANALYSIS *Karen M. Leighly, Jules P. Halpern, Edward B. Jenkins, & Darrin Casebeer*	1
INTERACTIONS OF A LIGHT HYPERSONIC JET WITH A NONUNIFORM INTERSTELLAR MEDIUM *Ralph S. Sutherland & Geoffrey V. Bicknell*	37
THE X-RAY BINARY POPULATION IN M33. II. X-RAY SPECTRA AND VARIABILITY © *H.-J. Grimm, J. McDowell, A. Zezas, D.-W. Kim, & G. Fabbiano*	70
FAINT H I 21 cm EMISSION LINE WINGS AT FORBIDDEN VELOCITIES © *Ji-hyun Kang & Bon-Chul Koo*	85
THE STELLAR POPULATION OF THE CHAMAELEON I STAR-FORMING REGION *K. L. Luhman*	104
ASTROMETRIC ORBITS FOR *HIPPARCOS* STOCHASTIC BINARIES *A. Goldin & V. V. Makarov*	137
AN IMAGING SURVEY FOR EXTRASOLAR PLANETS AROUND 45 CLOSE, YOUNG STARS WITH THE SIMULTANEOUS DIFFERENTIAL IMAGER AT THE VERY LARGE TELESCOPE AND MMT © *Beth A. Biller, Laird M. Close, Elena Masciadri, Eric Nielsen, Rainer Lenzen, Wolfgang Brandner, Donald McCarthy, Markus Hartung, Stephan Kellner, Eric Mamajek, Thomas Henning, Douglas Miller, Matthew Kenworthy, & Craig Kulesa*	143
THE ROBUSTNESS OF LEAST-SQUARES FREQUENCY SWITCHING (LSFS) *B. Winkel & J. Kerp*	166
PHOTOIONIZATION CROSS SECTION FOR Ni XIX *Alok K. S. Jha, Sanjay Tyagi, & Man Mohan*	177

2007 DECEMBER, NUMBER 2

THE *GALEX* ULTRAVIOLET ATLAS OF NEARBY GALAXIES © *Armando Gil de Paz, Samuel Boissier, Barry F. Madore, Mark Seibert, Young H. Joe, Alessandro Boselli, Ted K. Wyder, David Thilker, Luciana Bianchi, Soo-Chang Rey, R. Michael Rich, Tom A. Barlow, Tim Conrow, Karl Forster, Peter G. Friedman, D. Christopher Martin, Patrick Morrissey, Susan G. Neff, David Schiminovich, Todd Small, José Donas, Timothy M. Heckman, Young-Wook Lee, Bruno Milliard, Alex S. Szalay, & Sukyoung Yi*	185
EXTINCTION-CORRECTED STAR FORMATION RATES EMPIRICALLY DERIVED FROM ULTRAVIOLET–OPTICAL COLORS *Marie Treyer, David Schiminovich, Ben Johnson, Mark Seibert, Ted Wyder, Tom A. Barlow, Tim Conrow, Karl Forster, Peter G. Friedman, D. Christopher Martin, Patrick Morrissey, Susan G. Neff, Todd Small, Luciana Bianchi, José Donas, Timothy M. Heckman, Young-Wook Lee, Barry F. Madore, Bruno Milliard, R. Michael Rich, Alex S. Szalay, Barry Y. Welsh, & Sukyoung K. Yi*	256
UV STAR FORMATION RATES IN THE LOCAL UNIVERSE *Samir Salim, R. Michael Rich, Stéphane Charlot, Jarle Brinchmann, Benjamin D. Johnson, David Schiminovich, Mark Seibert, Ryan Mallery, Timothy M. Heckman, Karl Forster, Peter G. Friedman, D. Christopher Martin, Patrick Morrissey, Susan G. Neff, Todd Small, Ted K. Wyder, Luciana Bianchi, José Donas, Young-Wook Lee, Barry F. Madore, Bruno Milliard, Alex S. Szalay, Barry Y. Welsh, & Sukyoung K. Yi*	267
THE UV-OPTICAL GALAXY COLOR-MAGNITUDE DIAGRAM. I. BASIC PROPERTIES © *Ted K. Wyder, D. Christopher Martin, David Schiminovich, Mark Seibert, Tamás Budavári, Marie A. Treyer, Tom A. Barlow, Karl Forster, Peter G. Friedman, Patrick Morrissey, Susan G. Neff, Todd Small, Luciana Bianchi, José Donas, Timothy M. Heckman, Young-Wook Lee, Barry F. Madore, Bruno Milliard, R. Michael Rich, Alex S. Szalay, Barry Y. Welsh, & Sukyoung K. Yi*	293
THE UV-OPTICAL COLOR MAGNITUDE DIAGRAM. II. PHYSICAL PROPERTIES AND MORPHOLOGICAL EVOLUTION ON AND OFF OF A STAR-FORMING SEQUENCE *David Schiminovich, Ted K. Wyder, D. Christopher Martin, Benjamin. D. Johnson, Samir Salim, Mark Seibert, Marie A. Treyer, Tamás Budavári, Charles Hoopes, Michel Zamojski, Tom A. Barlow, Karl G. Forster, Peter G. Friedman, Patrick Morrissey, Susan G. Neff, Todd A. Small, Luciana Bianchi, José Donas, Timothy M. Heckman, Young-Wook Lee, Barry F. Madore, Bruno Milliard, R. Michael Rich, Alex. S. Szalay, Barry Y. Welsh, & Sukyoung Yi*	315

Page

THE UV-OPTICAL GALAXY COLOR-MAGNITUDE DIAGRAM. III. CONSTRAINTS ON EVOLUTION FROM THE BLUE TO THE RED SEQUENCE 342
D. Christopher Martin, Ted K. Wyder, David Schiminovich, Tom A. Barlow, Karl Forster, Peter G. Friedman, Patrick Morrissey, Susan G. Neff, Mark Seibert, Todd Small, Barry Y. Welsh, Luciana Bianchi, José Donas, Timothy M. Heckman, Young-Wook Lee, Barry F. Madore, Bruno Milliard, R. Michael Rich, Alex S. Szalay, & Sukyoung K. Yi

ONGOING FORMATION OF BULGES AND BLACK HOLES IN THE LOCAL UNIVERSE: NEW INSIGHTS FROM *GALEX* 357
Guinevere Kauffmann, Timothy M. Heckman, Tamás Budavári, Stephane Charlot, Charles G. Hoopes, D. Christopher Martin, Mark Seibert, Tom A. Barlow, Luciana Bianchi, Tim Conrow, José Donas, Karl Forster, Peter G. Friedman, Young-Wook Lee, Barry F. Madore, Bruno Milliard, Patrick F. Morrissey, Susan G. Neff, R. Michael Rich, David Schiminovich, Todd Small, Alex S. Szalay, Ted K. Wyder, & Sukyoung K. Yi

ULTRAVIOLET, OPTICAL, AND INFRARED CONSTRAINTS ON MODELS OF STELLAR POPULATIONS AND DUST ATTENUATION 377
Benjamin D. Johnson, David Schiminovich, Mark Seibert, Marie Treyer, D. Christopher Martin, Tom A. Barlow, Karl Forster, Peter G. Friedman, Patrick Morrissey, Susan G. Neff, Todd Small, Ted K. Wyder, Luciana Bianchi, José Donas, Timothy M. Heckman, Young-Wook Lee, Barry F. Madore, Bruno Milliard, R. Michael Rich, Alex S. Szalay, Barry Y. Welsh, & Sukyoung K. Yi

ULTRAVIOLET THROUGH INFRARED SPECTRAL ENERGY DISTRIBUTIONS FROM 1000 SDSS GALAXIES: DUST ATTENUATION 392
Benjamin D. Johnson, David Schiminovich, Mark Seibert, Marie Treyer, D. Christopher Martin, Tom A. Barlow, Karl Forster, Peter G. Friedman, Patrick Morrissey, Susan G. Neff, Todd Small, Ted K. Wyder, Luciana Bianchi, José Donas, Timothy M. Heckman, Young-Wook Lee, Barry F. Madore, Bruno Milliard, R. Michael Rich, Alex S. Szalay, Barry Y. Welsh, & Sukyoung K. Yi

THE LOCAL UNIVERSE AS SEEN IN THE FAR-INFRARED AND FAR-ULTRAVIOLET: A GLOBAL POINT OF VIEW OF THE LOCAL RECENT STAR FORMATION © 404
V. Buat, T. T. Takeuchi, J. Iglesias-Páramo, C. K. Xu, D. Burgarella, A. Boselli, T. Barlow, L. Bianchi, J. Donas, K. Forster, P. G. Friedman, T. M. Heckman, Y.-W. Lee, B. F. Madore, D. C. Martin, B. Milliard, P. Morissey, S. Neff, M. Rich, D. Schiminovich, M. Seibert, T. Small, A. S. Szalay, B. Welsh, T. Wyder, & S. K. Yi

THE STAR FORMATION AND EXTINCTION COEVOLUTION OF UV-SELECTED GALAXIES OVER $0.05 < z < 1.2$ 415
D. Christopher Martin, Todd Small, David Schiminovich, Ted K. Wyder, Pablo G. Pérez-González, Benjamin Johnson, Christian Wolf, Tom A. Barlow, Karl Forster, Peter G. Friedman, Patrick Morrissey, Susan G. Neff, Mark Seibert, Barry Y. Welsh, Luciana Bianchi, José Donas, Timothy M. Heckman, Young-Wook Lee, Barry F. Madore, Bruno Milliard, R. Michael Rich, Alex S. Szalay, Sukyoung K. Yi, Klaus Meisenheimer, & George Rieke

IR AND UV GALAXIES AT $z = 0.6$: EVOLUTION OF DUST ATTENUATION AND STELLAR MASS AS REVEALED BY SWIRE AND *GALEX* 432
C. Kevin Xu, David Shupe, Veronique Buat, Michael Rowan-Robinson, Thomas Babbedge, Jorge Iglesias-Páramo, Tsutomu T. Takeuchi, Tom A. Barlow, Tim Conrow, Fan Fang, Karl Forster, Peter G. Friedman, Eduardo Gonzales-Solares, Carol Lonsdale, D. Christopher Martin, Patrick Morrissey, Susan G. Neff, David Schiminovich, Mark Seibert, Todd Small, Gene Smith, Jason Surace, & Ted K. Wyder

THE DIVERSE PROPERTIES OF THE MOST ULTRAVIOLET-LUMINOUS GALAXIES DISCOVERED BY *GALEX* 441
Charles G. Hoopes, Timothy M. Heckman, Samir Salim, Mark Seibert, Christy A. Tremonti, David Schiminovich, R. Michael Rich, D. Christopher Martin, Stephane Charlot, Guinevere Kauffmann, Karl Forster, Peter G. Friedman, Patrick Morrissey, Susan G. Neff, Todd Small, Ted K. Wyder, Luciana Bianchi, José Donas, Young-Wook Lee, Barry F. Madore, Bruno Milliard, Alex S. Szalay, Barry Y. Welsh, & Sukyoung K. Yi

THE YOUNG AND THE DUSTLESS: INTERPRETING RADIO OBSERVATIONS OF ULTRAVIOLET-LUMINOUS GALAXIES 457
Antara R. Basu-Zych, David Schiminovich, Benjamin D. Johnson, Charles Hoopes, Roderik Overzier, Marie A. Treyer, Timothy M. Heckman, Tom A. Barlow, Luciana Bianchi, Tim Conrow, José Donas, Karl G. Forster, Peter G. Friedman, Young-Wook Lee, Barry F. Madore, D. Christopher Martin, Bruno Milliard, Patrick Morrissey, Susan G. Neff, R. Michael Rich, Samir Salim, Mark Seibert, Todd A. Small, Alex S. Szalay, Ted K. Wyder, & Sukyoung Yi

KECK DEIMOS SPECTROSCOPY OF A *GALEX* UV-SELECTED SAMPLE FROM THE MEDIUM IMAGING SURVEY 471
Ryan P. Mallery, R. Michael Rich, Samir Salim, Todd Small, Stephane Charlot, Mark Seibert, Ted Wyder, Tom A. Barlow, Karl Forster, Peter G. Friedman, D. Christopher Martin, Patrick Morrissey, Susan G. Neff, David Schiminovich, Luciana Bianchi, José Donas, Timothy M. Heckman, Young-Wook Lee, Barry F. Madore, Bruno Milliard, Alex S. Szalay, Barry Y. Welsh, & Sukyoung Yi

NITROGEN PRODUCTION IN STARBURST GALAXIES DETECTED BY *GALEX* 482
Ryan P. Mallery, Lisa Kewley, R. Michael Rich, Samir Salim, Stephane Charlot, Christy Tremonti, Mark Seibert, Todd Small, Ted Wyder, Tom A. Barlow, Karl Forster, Peter G. Friedman, D. Christopher Martin, Patrick Morrissey, Susan G. Neff, David Schiminovich, Luciana Bianchi, José Donas, Timothy M. Heckman, Young-Wook Lee, Barry F. Madore, Bruno Milliard, Alex S. Szalay, Barry Y. Welsh, & Sukyoung Yi

CLUSTERING PROPERTIES OF REST-FRAME UV-SELECTED GALAXIES. I. THE CORRELATION LENGTH DERIVED FROM *GALEX* DATA IN THE LOCAL UNIVERSE 494
Bruno Milliard, Sébastien Heinis, Jérémy Blaizot, Stéphane Arnouts, David Schiminovich, Tamás Budavári, José Donas, Marie Treyer, Michel Laget, Maurice Viton, Ted K. Wyder, Alex S. Szalay, Tom A. Barlow, Karl Forster, Peter G. Friedman, D. Christopher Martin, Patrick Morrissey, Susan G. Neff, Mark Seibert, Todd Small, Luciana Bianchi, Timothy M. Heckman, Young-Wook Lee, Barry F. Madore, R. Michael Rich, Barry Y. Welsh, Sukyoung K. Yi, & C. K. Xu

CLUSTERING PROPERTIES OF REST-FRAME UV-SELECTED GALAXIES. II. MIGRATION OF STAR FORMATION SITES WITH COSMIC TIME FROM *GALEX* AND CFHTLS 503
Sébastien Heinis, Bruno Milliard, Stéphane Arnouts, Jérémy Blaizot, David Schiminovich, Tamás Budavári, Olivier Ilbert, José Donas, Marie Treyer, Ted K. Wyder, Henry J. McCracken, Tom A. Barlow, Karl Forster, Peter G. Friedman, D. Christopher Martin, Patrick Morrissey, Susan G. Neff, Mark Seibert, Todd Small, Luciana Bianchi, Timothy M. Heckman, Young-Wook Lee, Barry F. Madore, R. Michael Rich, Alex S. Szalay, Barry Y. Welsh, Sukyoung K. Yi, & C. K. Xu

CONTENTS

Page

THE EFFECT OF ENVIRONMENT ON THE ULTRAVIOLET COLOR-MAGNITUDE RELATION OF EARLY-TYPE GALAXIES 512
K. Schawinski, S. Kaviraj, S. Khochfar, S.-J. Yoon, S. K. Yi, J.-M. Deharveng, A. Boselli, T. Barlow, T. Conrow, K. Forster, P. G. Friedman, D. C. Martin, P. Morrissey, S. Neff, D. Schiminovich, M. Seibert, T. Small, T. Wyder, L. Bianchi, J. Donas, T. Heckman, Y.-W. Lee, B. Madore, B. Milliard, R. M. Rich, & A. Szalay

RADIAL VARIATION OF ATTENUATION AND STAR FORMATION IN THE LARGEST LATE-TYPE DISKS OBSERVED WITH *GALEX* 524
Samuel Boissier, Armando Gil de Paz, Alessandro Boselli, Barry F. Madore, Véronique Buat, Luca Cortese, Denis Burgarella, Juan Carlos Muñoz Mateos, Tom A. Barlow, Karl Forster, Peter G. Friedman, D. Christopher Martin, Patrick Morrissey, Susan G. Neff, David Schiminovich, Mark Seibert, Todd Small, Ted K. Wyder, Luciana Bianchi, José Donas, Timothy M. Heckman, Young-Wook Lee, Bruno Milliard, R. Michael Rich, Alex S. Szalay, Barry Y. Welsh, & Sukyoung K. Yi

A SEARCH FOR EXTENDED ULTRAVIOLET DISK (XUV-DISK) GALAXIES IN THE LOCAL UNIVERSE 538
David A. Thilker, Luciana Bianchi, Gerhardt Meurer, Armando Gil de Paz, Samuel Boissier, Barry F. Madore, Alessandro Boselli, Annette M. N. Ferguson, Juan Carlos Muñoz-Mateos, Greg J. Madsen, Salman Hameed, Roderik A. Overzier, Karl Forster, Peter G. Friedman, D. Christopher Martin, Patrick Morrissey, Susan G. Neff, David Schiminovich, Mark Seibert, Todd Small, Ted K. Wyder, José Donas, Timothy M. Heckman, Young-Wook Lee, Bruno Milliard, R. Michael Rich, Alex S. Szalay, Barry Y. Welsh, & Sukyoung K. Yi

ULTRAVIOLET AND INFRARED DIAGNOSTICS OF STAR FORMATION AND DUST IN NGC 7331 572
David A. Thilker, Samuel Boissier, Luciana Bianchi, Daniela Calzetti, Alessandro Boselli, Daniel A. Dale, Mark Seibert, Robert Braun, Denis Burgarella, Armando Gil de Paz, George Helou, Fabian Walter, R. C. Kennicutt, Jr., Barry F. Madore, D. Christopher Martin, Tom A. Barlow, Karl Forster, Peter G. Friedman, Patrick Morrissey, Susan G. Neff, David Schiminovich, Todd Small, Ted K. Wyder, José Donas, Timothy M. Heckman, Young-Wook Lee, Bruno Milliard, R. Michael Rich, Alex S. Szalay, Barry Y. Welsh, & Sukyoung K. Yi

GALEX UV COLOR RELATIONS FOR NEARBY EARLY-TYPE GALAXIES 597
José Donas, Jean-Michel Deharveng, R. Michael Rich, Sukyoung K. Yi, Young-Wook Lee, Alessandro Boselli, Armando Gil de Paz, Samuel Boissier, Stéphane Charlot, Samir Salim, Luciana Bianchi, Tom A. Barlow, Karl Forster, Peter G. Friedman, Timothy M. Heckman, Barry F. Madore, D. Christopher Martin, Bruno Milliard, Patrick Morrissey, Susan G. Neff, David Schiminovich, Mark Seibert, Todd Small, Alex S. Szalay, Barry Y. Welsh, & Ted K. Wyder

THE LOOK-BACK TIME EVOLUTION OF FAR-ULTRAVIOLET FLUX FROM THE BRIGHTEST CLUSTER ELLIPTICAL GALAXIES AT $z < 0.2$ 607
Chang H. Ree, Young-Wook Lee, Sukyoung K. Yi, Suk-Jin Yoon, R. Michael Rich, Jean-Michel Deharveng, Young-Jong Sohn, Sugata Kaviraj, Jonghwan Rhee, Yun-Kyeong Sheen, Kevin Schawinski, Soo-Chang Rey, Alessandro Boselli, Jaehyon Rhee, José Donas, Mark Seibert, Ted K. Wyder, Tom A. Barlow, Luciana Bianchi, Karl Forster, Peter G. Friedman, Timothy M. Heckman, Barry F. Madore, D. Christopher Martin, Bruno Milliard, Patrick Morrissey, Susan G. Neff, David Schiminovich, Todd Small, Alex S. Szalay, & Barry Y. Welsh

UV-OPTICAL COLORS AS PROBES OF EARLY-TYPE GALAXY EVOLUTION 619
S. Kaviraj, K. Schawinski, J. E. G. Devriendt, I. Ferreras, S. Khochfar, S.-J. Yoon, S. K. Yi, J.-M. Deharveng, A. Boselli, T. Barlow, T. Conrow, K. Forster, P. G. Friedman, D. C. Martin, P. Morrissey, S. Neff, D. Schiminovich, M. Seibert, T. Small, T. Wyder, L. Bianchi, J. Donas, T. Heckman, Y.-W. Lee, B. Madore, B. Milliard, R. M. Rich, & A. Szalay

GALEX ULTRAVIOLET PHOTOMETRY OF GLOBULAR CLUSTERS IN M31: THREE-YEAR RESULTS AND A CATALOG 643
Soo-Chang Rey, R. Michael Rich, Sangmo T. Sohn, Suk-Jin Yoon, Chul Chung, Sukyoung K. Yi, Young-Wook Lee, Jaehyon Rhee, Luciana Bianchi, Barry F. Madore, Kyungsook Lee, Tom A. Barlow, Karl Forster, Peter G. Friedman, D. Christopher Martin, Patrick Morrissey, Susan G. Neff, David Schiminovich, Mark Seibert, Todd Small, Ted K. Wyder, José Donas, Timothy M. Heckman, Bruno Milliard, Alex S. Szalay, & Barry Y. Welsh

STATISTICAL PROPERTIES OF THE *GALEX*-SDSS MATCHED SOURCE CATALOGS, AND CLASSIFICATION OF THE UV SOURCES 659
Luciana Bianchi, Lino Rodriguez-Merino, Maurice Viton, Michel Laget, Boryana Efremova, James Herald, Alberto Conti, Bernie Shiao, Armando Gil de Paz, Samir Salim, A. Thakar, Peter G. Friedman, Soo-Chang Rey, David Thilker, Tom A. Barlow, Tamás Budavári, José Donas, Karl Forster, Timothy M. Heckman, Young-Wook Lee, Barry F. Madore, D. Christopher Martin, Bruno Milliard, Patrick Morrissey, Susan G. Neff, R. Michael Rich, David Schiminovich, Mark Seibert, Todd Small, Alex S. Szalay, Ted K. Wyder, Barry Y. Welsh, & Sukyoung K. Yi

THE DETECTION OF M DWARF UV FLARE EVENTS IN THE *GALEX* DATA ARCHIVES 673
Barry Y. Welsh, Jonathan M. Wheatley, Mark Seibert, Stanley E. Browne, Andrew A. West, Oswald H. W. Siegmund, Tom A. Barlow, Karl Forster, Peter G. Friedman, D. Christopher Martin, Patrick Morrissey, Todd Small, Ted Wyder, David Schiminovich, Susan Neff, & R. Michael Rich

THE CALIBRATION AND DATA PRODUCTS OF *GALEX* 682
Patrick Morrissey, Tim Conrow, Tom A. Barlow, Todd Small, Mark Seibert, Ted K. Wyder, Tamás Budavári, Stephane Arnouts, Peter G. Friedman, Karl Forster, D. Christopher Martin, Susan G. Neff, David Schiminovich, Luciana Bianchi, José Donas, Timothy M. Heckman, Young-Wook Lee, Barry F. Madore, Bruno Milliard, R. Michael Rich, Alex S. Szalay, Barry Y. Welsh, & Sukyoung K. Yi